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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

DIVINE, LUCAS

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/932,631

Applicant(s)

PHILLIPS ET AL.

Examiner

Lucas Divine

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 16 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/16/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 2, 5 – 10, and 13 – 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Sekizawa (US 6681349).

Regarding claim 9, Sekizawa teaches a **consumable monitoring system** (Fig. 1)

**comprising:**

**a database (23 as shown as part of monitoring apparatus 20 in Fig. 27) configured to store information regarding a plurality of consumables usable by an image forming device to form hard images** (Fig. 28B, as stored in database 30, shows information regarding consumables for each network printer; col. 33 line 35), **wherein the stored information for an individual one of the consumables** (Figs. 28A and B, ink remaining amount 1 for the black ink consumable is an individual consumable, the associated stored information for this consumable is the complete tables of Figs. 28A and B, so the agent information in 28A is associated and included in the storage information for the individual consumable black ink cartridge – for yellow ink amount 2, the storage information includes the same data, but it is still the stored information of the individual consumable) **includes a stored consumable identifier which**

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**identifies the respective consumable** (ink amount 1 for black ink cartridge identifies the specific cartridge), **and a stored party identifier utilized to identify a proper party associated with the respective consumable** (the agent information including company name, administrator as well as customer name and company are all identifiers of parties associated with the consumable that is being monitored; Fig. 28A);

**an interface** (LAN adapter 133; Fig. 26) **adapted to receive information regarding a consumable to be verified including a received consumable identifier which identifies the consumable to be verified and a received party identifier utilized to identify the proper party associated with the consumable to be verified** (LAN adapter 133 and functionally global information getting section 22 in Fig. 27 receive information regarding the status of the remote printing systems and extract the data [col. 33 lines 55-57] and forward the data onto the database management unit for managing the data in the database as discussed above, which includes the consumable and party identifiers); **and**

**processing circuitry** (Fig. 27, database management section 24 as controlled by CPU 130) **configured to compare the received consumable identifier with the stored consumable identifier and to compare the received party identifier with the stored party identifier** (col. 36 lines 10-25, wherein tables for customer, agent, printer, and status information are compared to the data in the database in order to update the database new information, which includes each field, including consumable and party identifier fields; if the database has the same data, nothing occurs, if the comparison reveals that new data is inputted, either the database is updated or, in the case of a whole table being new, a table is created).

Regarding claim 10, which depends from claim 9, Sekizawa further teaches **a message** (status report shown in Fig. 40A) **to the proper party** (OΔX Corporation) **associated with the respective consumable responsive to the comparisons** (consumable information displayed as updated with each comparison, for example, comparison on 91/11/04 is shown as well as the latest 97/11/06 which has just been compared).

Regarding claim 13, which depends from claim 9, Sekizawa teaches **a memory device** (database 23 is stored in memory device/hard disk 138), **and wherein the processing circuitry is configured to forward the received consumable identifier, the received party identifier, and date and time information** (Figs. 28A and B show plural date and time identifiers for when the data was taken, when it was received etc... further, regarding the reception to the current system, Fig. 35 shows a user window including the mail getting date and time, which is the time that the identifiers were received at the monitoring computer) **regarding the reception of the received consumable identifier and the received party identifier to the memory device for storage** (information for user use and display stored in hard disk, including database 28 which stores the party and consumable identifiers as discussed in the rejection of claim 1 and the time and date identifiers).

Regarding claim 14, which depends from claim 9, Sekizawa further teaches that **the interface is adapted to receive the information regarding the consumable to be verified including the received party identifier comprising a received device identifier which identifies the image forming device which communicated the information** (printer information including printer name [identifier] is included in the monitoring database as shown in Fig. 28B) **and**

**wherein the database is configured to store the stored party identifier comprising at least one stored device identifier which identifies an image forming device associated with the proper party for the respective consumable (Fig. 35 shows at least one image forming device associated with a single party identifier [OOO Corporation], which inherently must be stored in order to be displayed) and**

**wherein the processing circuitry is configured to compare the received device identifier with the stored device identifier to compare the received party identifier with the stored party identifier (complete table information is compared and updated in col. 36 lines 10-25, which includes printer information and all other information that is sent).**

Regarding claim 15, which depends from claim 14, Sekizawa further teaches **the database is configured to store the stored party identifier comprising a plurality of stored device identifiers which identify a plurality of image forming devices associated with the proper party of the respective consumable (Fig. 35 shows a plurality of image forming devices associated with a single party identifier [OOO Corporation], which inherently must be stored in order to be displayed), and**

**wherein the processing circuitry is configured to compare the received device identifier with the stored device identifiers (complete table information is compared and updated in col. 36 lines 10-25, which includes printer information and all other information that is sent).**

Regarding claim 16, which depends from claim 9, Sekizawa teaches that **interface is adapted to receive the information regarding the consumable to be verified (Fig. 26, interface 133 accepts information, including that of printer status, which is information regarding**

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the consumable) **including the received party identifier which directly identifies the proper party of the respective consumable** (the information also includes the party identifiers which directly identify the proper parties of the consumable – see Fig. 28A and B wherein Company Name, Customer Code, and Administrator are all identified and are all parts of information that have been received by the interface over the network).

Regarding claim 1, the structural elements of apparatus claim 9 perform all of the method steps of method claim 1. Therefore, claim 1 is rejected for the same reasons as stated above in the rejection of claim 9.

Regarding claim 2, which depends from claim 1, the structural elements of apparatus claim 10 perform all of the method steps of method claim 2. Therefore, claim 2 is rejected for the same reasons as stated above in the rejection of claim 10.

Regarding claim 5, which depends from claim 1, the structural elements of apparatus claim 13 perform all of the method steps of method claim 5. Therefore, claim 5 is rejected for the same reasons as stated above in the rejection of claim 13.

Regarding claim 6, which depends from claim 1, the structural elements of apparatus claim 14 perform all of the method steps of method claim 6. Therefore, claim 6 is rejected for the same reasons as stated above in the rejection of claim 14.

Regarding claim 7, which depends from claim 6, the structural elements of apparatus claim 15 perform all of the method steps of method claim 7. Therefore, claim 7 is rejected for the same reasons as stated above in the rejection of claim 15.

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Regarding claim 8, which depends from claim 1, the structural elements of apparatus claim 16 perform all of the method steps of method claim 8. Therefore, claim 8 is rejected for the same reasons as stated above in the rejection of claim 16.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17, 20, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekizawa in view of Yoshida et al. (US 6130757) hereafter as Yoshida.

Regarding claim 17, Sekizawa teaches **an image forming device (P(n) Fig. 3)**

**comprising:**

**an image engine configured to use a consumable to form a hard image** (implied that a network printer includes a print engine to print data onto a sheet);

**processing circuitry** (control processing circuitry 15 in agent unit 10 acting as printer server for monitoring devices; col. 20 lines 16-42) **coupled with the image engine** (control section coupled with image engine via local information getting section 11 and network 3a) **and configured to formulate an identifier message** (mail message formulated for transmission to global monitoring device shown in Fig. 22) **including a party identifier** (customer mail address identifies the party that is associated with the printer and the consumables in the printer as shown in Fig. 22) **utilized to identify a party associated with image forming device and an**



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**identifier of the consumable** (message includes identifiers for plural consumables associated with image forming device, for example, black ink consumable 1, Fig. 22), and

**wherein the processing circuitry is further configured to control communication of the identifier message** (control section 15 directs the information to be output to global monitoring device 20, see global Fig. 1); and

**an interface adapted to communicate externally of the image forming device and to communicate the identifier message** (interface 13, Fig. 3).

While Sekizawa teaches an image forming device and an agent unit that acts as a printer server for monitoring image forming devices, Sekizawa does not specifically teach that the monitoring functionality can be implemented by an image forming apparatus itself.

However, it is known in the art, and Yoshida teaches, an image forming apparatus that can act as a printer server or a printer client for controlling other network image forming devices, thus including image forming and print server related functions (multi-function device 1 as shown in Fig. 1; col. 4 lines 30-31, col. 9 lines 15-16, col. 9 line 1).

It would be obvious to one of ordinary skill in the art that the functionality of the agent unit of Sekizawa could have been implemented in a sophisticated image forming device such as that of Yoshida. The motivations for doing so would have been to reduce complexity by having all functionality needed at one device instead of two and it would allow image forming apparatuses to directly connect to the remote monitoring agent 20 of Sekizawa to complete transactions and status updates without the delay of a middle unit.

Regarding claim 20, which depends from claim 17, Sekizawa further teaches that **the identifier message including the party identifier which identifies the image forming device** (Fig. 22, wherein the printer serial number is included in the identifier message).

Regarding claim 21, which depends from claim 17, Sekizawa further teaches that **the identifier message including the party identifier which directly identifies the party associated with the image forming device** (Fig. 22, wherein the customer mail address acts as a party identifier, identifying the party associated with printer and consumable).

Regarding claim 23, which depends from claim 17, Sekizawa further teaches that **the image engine comprises a print engine** (network printer P(n) is implied to have a print engine that uses the consumable to print data onto a hard copy).

3. Claims 11 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekizawa as applied to claims 1 and 9 above, and further in view of Saruta (US 6631967).

Regarding claim 11, which depends from claim 9, Sekizawa teaches console unit 20 and agent unit 10 acting to control the printer devices. Sekizawa also teaches updating the monitoring device with the latest printer status, including ink and toner level of consumables.

Sekizawa does not specifically teach **disabling at least one operation of an image forming device coupled with the consumable to be verified responsive to the comparison**.

Saruta teaches **disabling at least one operation of an image forming device coupled with the consumable** (S36 Fig. 13) **to be verified responsive to the comparison** (S34).

It would have been obvious to one of ordinary skill in the art that the controlling units of Sekizawa would prevent the printers from printing if they were out of ink/toner. The motivation

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for doing so would be to prevent the printer from trying to print sheets that it is not capable of printing correctly, thus saving other printing resources until the consumable is replenished.

Regarding claim 3, which depends from claim 1, the structural elements of apparatus claim 11 perform all of the method steps of method claim 3. Therefore, claim 3 is rejected for the same reasons as stated above in the rejection of claim 11.

4. Claim 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Sekizawa in view of Yoshida as applied to claim 17 above, and further in view of Saruta.

Regarding claim 18, which depends from claim 17, Sekizawa teaches console unit 20 and agent unit 10 acting to control the printer devices. Sekizawa also teaches updating the monitoring device with the latest printer status, including ink and toner level of consumables. Sekizawa also teaches that the **interface (13) can receive a command responsive to the communication of the identifier message** (the console unit can send messages back in response, such as status reports [Fig. 40] and printers can receive commands from remote units, such as console unit 20).

Sekizawa does not specifically teach **disabling at least one operation of an image forming device coupled with the consumable to be verified responsive to the comparison.**

Saruta teaches **disabling at least one operation of an image forming device coupled with the consumable (S36 Fig. 13) to be verified responsive to the comparison (S34).**

It would have been obvious to one of ordinary skill in the art that the controlling units of Sekizawa would prevent the printers from printing if they were out of ink/toner. The motivation

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for doing so would be to prevent the printer from trying to print sheets that it is not capable of printing correctly, thus saving other printing resources until the consumable is replenished.

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekizawa in view of Yoshida as applied to claim 17 above, and further in view of Okazawa (US 2002/0002492).

Regarding claim 22, which depends from claim 17, Sekizawa further **teaches to control the communication of the identifier message** (Fig. 22 shows the identifier message with consumable status within).

While the combination of Sekizawa in view of Yoshida teaches sending an updated communication responsive to the change of printer status to inform the global management device 20 of the latest status, the combination does not specifically express **detect coupling of the consumable with the image forming device** and updating printer status based on the coupling of a new consumable.

Okazawa teaches that when a new consumable is loaded, **the coupling thereof is detected** (mounting of cartridge in system; paragraphs 86 and 87, Fig. 26). The consumable identifier is read and the host is informed of the new consumable (S2604).

It would have been obvious to one of ordinary skill in the art that a printer such as that of the combination would include the detecting of newly mounted printer cartridges and would inform the host of the new cartridge as in Okazawa. The motivation for doing so would be to let the monitoring apparatus know the status of the printer, including for correcting any consumable empty errors are that now gone and printing can resume.

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6. Claims 12 and 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Sekizawa as applied to claims 1 and 9 above, and further in view of Takano et al. (US 5335048) hereafter as Takano.

Regarding claim 12, which depends from claim 9, while Sekizawa teaches updating consumable level information and informing a user (see Figs. 40A and B), Sekizawa does not specifically teach **forwarding a warning message to an image forming device coupled with the consumable**.

However, Takano teaches **forwarding a warning message to an image forming device coupled with the consumable** (Fig. 16 step 178, col. 15 lines 11-13 teach transmitting a stock lacking warning to the image forming device when the stock of the consumable is low).

It would have been obvious to one of ordinary skill in the art to inform a printing device of a low consumable. The motivation for doing so would have been to let the user at the device know that the consumable is low so the consumable can be replenished (for example, user message shown in Fig. 21 of Takano).

Regarding claim 4, which depends from claim 1, the structural elements of apparatus claim 12 perform all of the method steps of method claim 4. Therefore, claim 4 is rejected for the same reasons as stated above in the rejection of claim 12.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekizawa as applied to claim 17 above, and further in view of Takano.

Regarding claim 19, which depends from claim 7, while Sekizawa teaches updating consumable level information and informing a user (see Figs. 40A and B), Sekizawa does not

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specifically teach **forwarding a warning message that is received at an image forming device and is communicated using the image forming device.**

However, Takano teaches **forwarding a warning message that is received at an image forming device** (Fig. 16 step 178, col. 15 lines 11-13 teach transmitting a stock lacking warning to the image forming device when the stock of the consumable is low) **and is communicated using the image forming device** (copying machine displays user message shown in Fig. 21).

It would have been obvious to one of ordinary skill in the art to inform a printing device of a low consumable. The motivation for doing so would have been to let the user at the device know that the consumable is low so the consumable can be replenished.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Divine whose telephone number is 703-306-3440. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucas Divine  
Examiner  
Art Unit 2624

ljd

  
**KING Y. POON**  
**PRIMARY EXAMINER**